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Abstract

A packet routing/switching system and method are provided by which label switched routing is performed within a hierarchy of LSP/FA-LSPs defined/provisioned in a network of

5 interconnected nodes. Rather than transmitting an entire label stack with an LSP label for each LSP/FA-LSP in the hierarchy, at a given node in the network, a single LSP label is transmitted together with a components label which contains a list of component identifiers which do not inherently identify

10 LSP/FA-LSPs, but from which the full LSP/FA-LSP labels can be determined locally at each node using previously distributed information described in detail below. The list of component identifiers is a shorthand way identifying to adjacent nodes the identity of the LSP/FA-LSP hierarchy without transmitting

15 the entire LSP labels and thus significantly reducing overhead. The single label which is transmitted is the label of the LSP/FA-LSP of which the given node forms a part.